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POISONOUS RANGE PLANTS IN RELATION TO RANGE USE

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POISONOUS RANGE PLANTS IN RELATION TO RANGE USE

In "Farming in South Africa", a periodical issued by the Department of Agriculture and Forestry, Union of South Africa, is an article on "The Occurrence of Poisonous Plants on, and the Trampling and Burning of Pasturage." Much of it reads like a description of parts of New Mexico, or elsewhere in the Southwest. Perhaps our South African friends are a jump or two ahead of us in some of their observations and in the steps they are taking to remedy the errors of the past.

Part of the article deals with the widely practiced system of burning the veld once or twice a year with the result that the grass is killed and poisonous and unpalatable plants gain a footing. Burning is not a problem in much of the Southwest. Frequently, however, we find startling examples of the effect of burning dry sacaton and tobosa. If these stands are burned at a very dry time the result is disastrous and inevitable. Mr. A. W. McCormick, a Bernalillo County rancher, tells of an example of this from the Isleta Grant south of Albuquerque. A large field of sacaton was accidentally fired at a very dry time. At present there are a few scattered clumps of sacaton but practically the entire field is now covered with burrow grass (Scleropogon brevifolia). This grass has its merits, one being that it can take care of a situation like this but it certainly cannot compare with the sacaton in quantity of forage. Where tobosa is burned during extremely dry times the succeeding season brings a yield of nothing, chiefly, or Russian Thistle or other annual weeds.

MAY 13 1941

The interest at the moment is not in the effects of burning but rather in those of overgrazing. Nor is the point here the disfiguring of the landscape by gullies, the destruction of farms from debris or the filling up of reservoirs with silt. It is rather the resultant production of useless and poisonous plants. In final analyses, remember our aim is not the conservation of the soil per se. It is the production of the greatest perpetual income from the land, not for the quarter section, section, or a township, but for the entire country. To get this income perpetually the soil must be conserved.

Even the watershed for a city's water supply can in most cases be made to yield an income over and above water for homes and lawns. Our range lands today are yielding a low per cent of their possible income. The argument is that the ranges are stocked beyond carrying capacity, that stock never should have been put on many ranges, and other such statements. The fact is that with a little breathing time and proper range management, even now the carrying capacity could be greatly increased.

West of Mogollon, New Mexico, on a mesa above the San Francisco River, are two fields, one on either side of the highway. One is a solid field of snakeweed, the other a beautiful stand of Blue Grama without even a scattering of snakeweed. Needless to say, the Grama grass field could sustain several times the stock that the snakeweed area could sustain, and do so without evident injury to the stand. Where have you seen snakeweed west of Bernalillo, south of Socorro, about Springer, in the region

of Vaughn? In fact you can mention many places! It is always the same story. The palatable grasses are gone; the unpalatable snakeweed has been given a chance and has taken it. There are those who will argue that snakeweed is better than nothing,- at least it helps to hold the soil. Let us see. It is not nearly as good as Blue grama to hold the soil; as an emergency food for stock it is practically useless, and when eaten causes considerable abortion. Snakeweed, however, has one redeeming feature. When the range is properly managed it gives way, not too quickly to be sure, to grass.

Years ago on the Santa Rita Range Preserve south of Tucson, several grama grasses such as side oats, blue, black, Rothrock and hairy grama were abundant, but much of the range had already been severely overgrazed prior to the time the land was set aside as a preserve, and burroweed (Haplopappus hartwegi) had come in in large amounts. Today the Preserve is under close management but it is almost impossible to discourage the burroweed by grass competition once it has become established. Why is it there? It is unpalatable, and grazing and trampling cut down the grass competition, giving it opportunity for growth and survival. Like snakeweed, burroweed is somewhat poisonous, especially when animals are forced to eat it in any quantity.

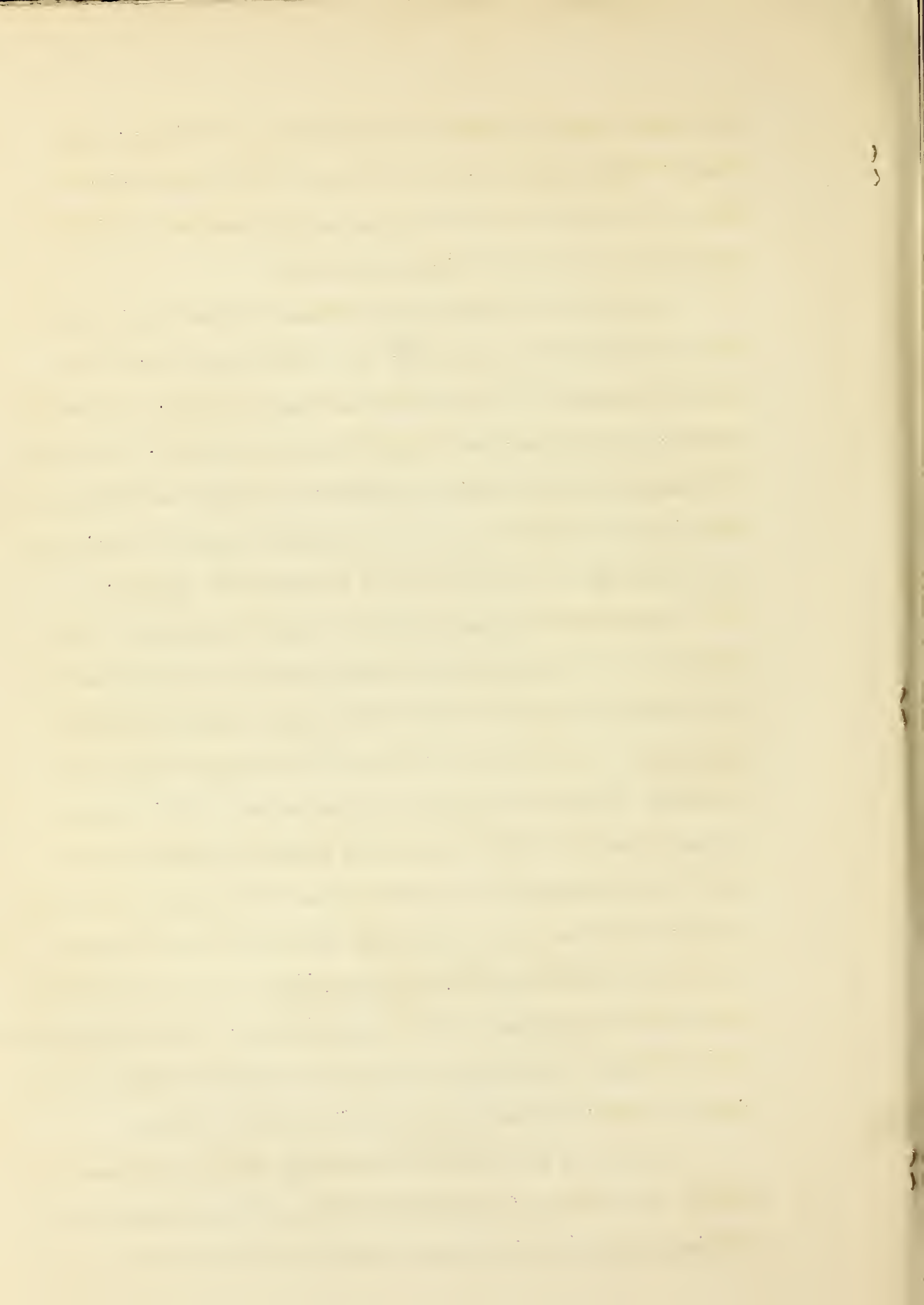
In many parts of Colorado, Texas and New Mexico some decades back, Pingue (Hymenoxys richardsoni) constituted a small part of the flora, a very small part. Today after competitive grazing has done its job Pingue is so abundant in some places

that sheep raising has been all but given up. It is the same story - Pingue cannot compete with grass on the well managed range but where the grass is all eaten down into the roots the unpalatable and poisonous Pingue comes in.

In portions of eastern and southeastern New Mexico, and western Texas in the sandy soil, is a plant which slightly resembles Poinsettia. It has milky juice and is eaten, with serious results, by livestock, according to Dr. A. L. Hershey, Professor of Botany at the New Mexico Agricultural College. Here again where the range is in poor condition this poisonous plant is being given every advantage by the depletion of the palatable species.

Two extremely poisonous plants occur at relatively high altitudes in the yellow pine and spruce belts in the Southwest. One of these is what is called locally Skunk Cabbage (Veratrum speciosum). It is in no way related to the skunk cabbage of the northwest. This grows in marshy places and when other forage is scarce is greedily eaten by sheep and frequently causes severe losses. The abundance of the plant seems to be augmented by heavy grazing. The other plant is what the Navajos call Owl's Claws, a species of Sneezeweed (Helenium hoopesii). It is a coarse plant with large yellow flowers resembling sunflowers. From being generally distributed it has become exceedingly abundant on ranges heavily grazed by sheep. It causes heavy stock losses at times.

The tale is the same with practically all our poisonous plants. The chokecherry kills many cattle. The trampling and overgrazing near isolated stands spreads the bushes rapidly. All



our locos are distributed and intensified the same way. Some ranges formerly considered excellent must now be shunned during much of the year because of Lambert's loco (Oxytropis lambertii), Wootton's milk vetch and Thurber's milk vetch, all violent locos which increase in abundance in disturbed soil and are frequently eaten in the spring when grass is not abundant. Seleniferous plants such as the two-grooved milk vetch (Astragalus bisulcatus), Hayden's milk vetch (A. haydenianus), and Patterson's milk vetch (A. pattersoni), all respond to soil disturbance and become serious menaces to stockraising.

One more example will suffice. The whorled milkweed (Asclepias galioides), is rarely eaten by stock until they are starved to it or until they eat it in hay. It is spreading rapidly in many localities because of soil disturbance due to grazing. Frequently sheep, horses and cattle are lost in great numbers because of this plant.

There are many other plants which could be named, such as the Drymarias, some of the seleniferous paint brushes (Castillejas), the common poison weeds (Delphinium), and the death camas (Zygadenus). The story is always the same. The natural enemy of the poisonous plant is vigorous, palatable grass. The enemy of the grass is improper grazing of livestock,- either too many, or grazing at the wrong time of year.

One of the most potent arguments for adequate range management is the control of poisonous plants.

